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A NEW JACKAL (*CANIS ADUSTUS*) FROM THE SUDAN

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In 1961 a detachment from the U.S. Naval Medical Research Unit No. 3 (NAMRU3) stationed in Cairo, Egypt, was detailed to the Sudan to conduct epidemiological studies in the vicinity of Malakal. During these field studies a series of jackals (*Canis adustus*) was obtained which have proven to be distinct at the subspecies level from other populations of jackals in East Africa.

All measurements given are in millimeters and capitalized color terms are from Ridgway, "Color Standards and Color Nomenclature," 1912.

To Dr. Harry Hoogstraal and his associates in NAMRU3 and to the officials of the Field Museum of Natural History, Chicago, Illinois, I would like to express my thanks for the opportunity of describing:

Canis adustus namrui new subspecies

Holotype: Adult male, skin and skull, Field Museum of Natural History, number 93856 from 1 mile south of Tir, Paloich District, Upper Nile Province, Republic of the Sudan. Obtained 3 March 1961 by Harry Hoogstraal, original number 13496.

Specimens examined: Thirteen, from: 1 mi. W Tir, 2 (1 ♂, 1 ♀); 1 mi. S Tir 5 (1 ♂, 4 ♀♀); 12 mi. W Paloich, 1 male; Taufikia, Malakal, 1 ♂; 10 mi. S. Paloich, 1 ♀; 5 mi. S Niayok, 1 ♀; 5 mi. S. Paloich, 1 ♀; 12 mi. N Malakal, 1 ♀.

Diagnosis: Reddish coloration of muzzle absent; general overall color grayish tan with strong admixture of black on back; belly color near Pinkish Cinnamon; anterior parts of forelegs near Buckthorn Brown and lacking any pronounced anterior stripe; cheeks, post- and subauricular areas white; backs of ears same color as back. Tail short, black dorsally and terminally all around. Skull small for the species; teeth relatively small; interpterygoid space lyre-shaped nasals relatively broad posteriorly.

Comparisons: Compared with *Canis adustus kaffensis* (Neumann, 1902), as known by specimens from Agarasalam, Sidamo District, Ethiopia, *C. a. namrui* differs in generally paler color; gray, rather than reddish brown, muzzle; absence of dark streak on anterior face of forearm and markedly paler legs and under parts. The skull is smaller in all respects; the interpterygoid space is lyrate rather than straight sided; and the zygomatic arches are less flaring laterally.

From *Canis adustus bweha* Heller, 1914, as known from Guasu Ngishu Plateau, Kenya, *C. a. namrui* differs in markedly paler color and apparently smaller size. The auditory bullae are larger and more inflated; the teeth are smaller; the zygomatic arches are less flaring laterally; and markedly less inflation occurs in the frontal area of the skull.

C. a. namrui differs from *Canis adustus notatus* Heller, 1914, as known from Masindi, Uganda, in markedly paler color and in somewhat smaller size. The skull is markedly smaller in every respect, especially in the size and degree of inflation of the auditory bullae, the size of the cheek teeth and in the length of the bony palate.

Measurements: *Holotype*.—Total length 925; length of tail 276; length of hind foot 151; length of ear ?; greatest length of skull 151.5; condyloincisive length 146.2; length of audital portion of auditory bulla 22.5; greatest breadth across zygomatic arches 75.9; least postorbital breadth 25.2; least interorbital breadth 25.9; greatest length of nasals 55.5.

Type series: Measurements with means and extremes of 4 males and 7 females, are respectively: Total length 1002.5 (925–1060), 946.3 (904–1002); length of tail 286.8 (276–310), 289.1 (278–316); length of hind foot 160.5 (151–172), 154.7 (147–168); length of ear from notch 73.0 (67–76), 72.7 (68–79); greatest length of skull 150.9 (142.2–156.0), 140.8 (137.2–144.3); condyloincisive length 146.5 (140.1–150.3), 136.3 (131.6–144.8); length of audital portion of auditory bulla 23.1 (22.2–23.8), 21.4 (20.3–22.9); greatest breadth across zygomatic arches 76.6 (75.8–78.2); 69.7 (66.2–74.0); least postorbital breadth 27.3 (24.7–31.3), 27.2 (23.5–31.0); least interorbital breadth 25.4 (23.1–27.3), 22.1 (20.3–23.2); greatest length of nasals 57.3 (53.4–61.6), 53.9 (45.4–61.4).

Remarks: No intergradation can be demonstrated between *C. a. namrui* and any of the adjacent subspecies, but this is undoubtedly owing to lack of specimens from intermediate areas rather than its total absence. Intergrades, when found, should be readily distinguishable if coloration is at all important.

Color in this new subspecies is so markedly different from other jackals from surrounding areas that specimens are readily identifiable on this character alone.

Comparisons with subspecies of *Canis adustus* other than those above are not necessary inasmuch as these three subspecies geographically stand between *C. a. namrui* and other named subspecies.

Etymology: *Canis adustus namrui* is named in recognition of the extensive epidemiological work done in northeastern Africa by the staff of Naval Medical Research Unit No. 3.